

HEALTHY HOUSING MAP USERS GUIDE

Contact Information

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Key Terms and Abbreviations

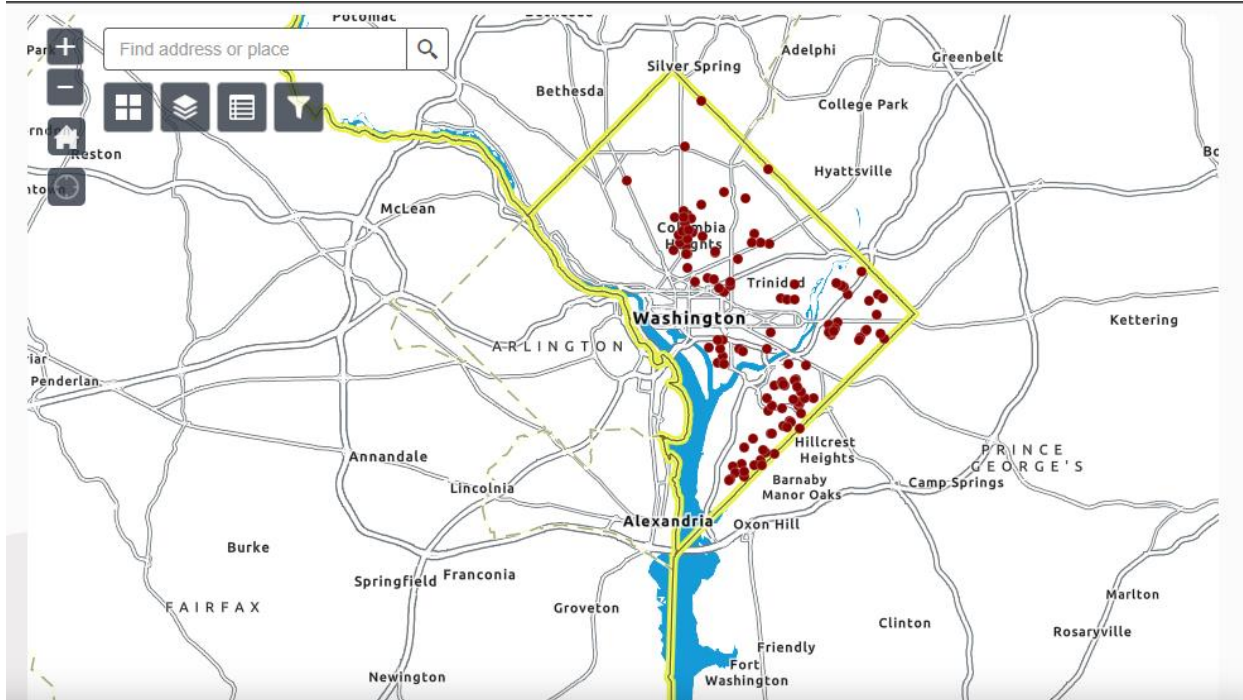
- CNH: Children’s National Hospital
- D.C.: District of Columbia
- D.C. MAR: District of Columbia Master Address Repository
- D.C. OCTO: District of Columbia Office of the Chief Technology Officer
- DCRA: District of Columbia Department of Consumer and Regulatory Affairs
- ED: Emergency Department
- Geocode: To assign geographical coordinates (latitude/longitude) to an address
- GIS: Geographic Information System
- HUD: United States Department of Housing and Urban Development
- Widget: An application, or component of an interface, that enables a user to perform a function or access a service

Background

This tool was made possible through the generous funding of Fannie Mae. By combining pediatric asthma data with housing conditions and property data in the District of Columbia (D.C.), it is now possible to explore the relationship between pediatric asthma and housing conditions. For more detailed information on how this mapping tool was developed, view the technical documentation available on the IMPACT DC website.





General Information

The Healthy Housing Map is a web-based mapping application accessible on the IMPACT DC website. It was created using Esri ArcGIS Web App Builder.



Upon navigating to the website, scroll down to the map. It opens to the default view of D.C. The default layer symbolized is Asthma Triggers and Pediatric Asthma Emergency Visits. The default basemap is Enhanced Contrast, which provides neighborhood and place names to orient the user. The map includes several interactive features including *Zoom*, *Home*, *My Location*, *Address Search Bar*, and a series of widgets.

Feature Descriptions





Feature	Functionality	Feature Icon
<i>Zoom</i>	Users may zoom in and out. Zooming in increases the resolution, allowing users to view a small area or point on the map in greater detail. Zooming out decreases resolution and allows the user to view a larger geographical area in less detail.	
<i>Home</i>	Recenters the map to the default view.	
<i>My Location</i>	Pans the map to the user's location.	
<i>Address Search Bar</i>	Users may enter any valid address and the map will zoom to that location.	

Feature	Functionality	Feature Icon
<i>Pop Up Boxes</i>	These dialogue boxes open to provide more information. For example, by clicking on a point, a box will open with asthma triggers at that location, and ownership information.	N/A

Functionality Through Widgets

There are four widgets that provide various functions to users. They are *Basemap Gallery*, *Layers List*, *Attribute Table*, and *Filter*. To open each widget, select its icon. To close the widget, select the icon again. These widgets are described briefly in the table below.

Widget Descriptions

Widget	Functionality	Widget Icon
<i>Basemap Gallery</i>	This allows the user to choose between several styles of basemaps or reference maps. These provide geographic context, for example, neighborhood names. The default style is Enhanced Contrast.	
<i>Layers List</i>	This allows the user to toggle layers on and off, controlling what is displayed in the map.	
<i>Attribute Table</i>	This displays the underlying data in a tabular format. Users may sort, filter, and export data to .CSV files for use on their own machine.	
<i>Filter</i>	This uses queries to change the data that is displayed in the map. There are several pre-written queries to choose from or users can create their own.	

Basemap Gallery

The *Basemap Gallery* widget presents a selection of various basemaps, or reference maps, that the user can choose from. The basemap is the bottom-most layer, on which other layers (i.e. housing violations, pediatric asthma emergency department visits) are positioned. They help orient the user by providing reference information such as neighborhood names or places of interest, and are available in different styles.

The basemaps included in the application are:

- Charted Territory Map
- Colored Pencil Map
- Community Map
- Dark Gray Canvas
- Firefly Imagery Hybrid
- Human Geography Dark
- Human Geography Map
- Imagery
- Terrain with Labels
- USGS National Map
- Imagery Hybrid
- Light Gray Canvas
- Mid-Century Map
- Modern Antique Map
- NAIP Imagery Hybrid
- National Geographic Style
- Navigation
- Navigation (Dark Mode)
- Topographic
- Enhanced Contrast Map
- Newspaper Map
- Nova Map
- Oceans
- OpenStreetMap
- OpenStreetMap (Blueprint)
- Outline Map
- Street
- Streets (Night)
- USA Topo Maps
- Enhanced Contrast Dark

Layers List

To view the layers, select the widget to open the dialogue box. There are many layers to choose from. These may be turned on and off by selecting the box to the left of the layer name. If checked, the layer turns on. If blank, the layer is turned off. Users may choose as many layers as they would like, however, each layer may obscure what is under it. It is best, to select as few layers as needed for a user’s particular interests. By clicking the arrow next to the box, the user can view the legend for that layer. The table below describes the layers.

Layer Name	Description
Asthma Triggers and Pediatric Asthma Emergency Visits	Contains information on properties that have both asthma triggers reported to DCRA in the past 24 months (source: DCRA Landlord Violations Tool) and ED visits for asthma (source: CNH Asthma Registry). This also includes housing concerns reported by social service agencies.
Pediatric Asthma Emergency Department Use	Contains information on properties that have both housing violations reported to DCRA in the past 24 months (source: DCRA Landlord Violations Tool) and ED visits for asthma (source: CNH Asthma Registry). Properties may or may not have asthma triggers reported. Properties are symbolized based on their

	relative asthma morbidity rate. For more information, view the Technical Documentation.
HUD-Subsidized Properties with Reported Housing Conditions and Children with Asthma	Contains information on HUD-Subsidized properties with (1) DCRA-reported housing violations in the past 24 months and (2) pediatric asthma. This also includes housing concerns reported by social service agencies.
Mice, Rodent or Insect Infestation Reported	Contains information on properties with reported violations of mice, rodents, or insects to DCRA in the past 24 months. This does not contain pediatric asthma information.
Mice or Rodent Reported	Contains information on properties with reported violations of mice or rodents to DCRA in the past 24 months. This does not contain pediatric asthma information.
HVAC Hazards Reported	Contains information on properties with reported HVAC violations to DCRA in the past 24 months. This does not contain pediatric asthma information.
Mold Hazards Reported	Contains information on properties with reported mold, plumbing, and leak violations to DCRA in the past 24 months. This does not contain pediatric asthma information.
Category of Asthma Triggers by Property	Contains information on properties with reported violations to DCRA, classified as asthma triggers, in the past 24 months. This does not contain pediatric asthma information.
Housing Conditions Reported (Asthma Triggers Only)	Contains information on individual DCRA violations, classified as asthma triggers, in the past 24 months. This does not contain pediatric asthma information.
Housing Conditions Reported	Contains information on all individual DCRA violations in the past 24 months. This does not contain information on asthma triggers or pediatric asthma.
Ward Boundaries	Contains information on DC wards, drawn in 2012.
Deteriorated Paint Index (HUD)	Contains information HUD's Deteriorated Paint Index. For more information about this metric see Deteriorated Paint Index by Tract .
Children in Poverty	Contains the most current release of data from the American Community Survey (5-year estimates) about poverty status among children.

Additional functionality of the Layers List widget include:

- Zoom to
- Set visibility range
- Disable pop-up
- Show item details
- Turn all layers on
- Turn all layers off

- Move up
- Move down
- Transparency
- Expand all layers
- Collapse all layers

Attribute Table

The *Attribute Table* widget opens the map data in a tabular format. Users can then customize how it is viewed by sorting and filtering. Data can also be exported to a CSV (comma-separated values) file. The CSV file can then be used in Microsoft Excel or other software the user is familiar with.

Additional functions in this widget include:

- Options
 - Show selected records
 - Show related records
 - Filter
 - Show/hide columns
 - Export all to CSV
- Filter by map extent: Only shows records that are visible in the current view of the map. If the user has zoomed in to a small area that only shows 5 points, these five points will be the only records displayed in the table. To display all records in a layer, ensure this option is not selected.
- Zoom to
- Clear selection
- Refresh: If changes are made while the table is open, the *Refresh* button applies those changes to table.


Filter

The *Filter* widget allows the user to control the records that are displayed on the map by constructing queries. Several preconfigured queries are available; however, the user may define their own by creating a custom query. Queries are directly related to only one layer, so users must ensure the correct layer is turned on for the query to display properly. For example, the preconfigured queries listed below are only related to the layer titled Pediatric Asthma Emergency Department Use. This layer must be turned on for the query to display.

The preconfigured queries are:

- Properties with low asthma morbidity

- Properties with medium asthma morbidity
- Properties with high asthma morbidity
- Properties with asthma triggers reported

Additional functions of this widget include are accessible by selecting : in the bottom right corner of the Filter dialogue box:

- Turn off all filters (except custom)
- Reset filters (except custom)

Create a custom filter: The user will be presented with a list of layers to choose from and the options to *Add Expression* or *Add Set*. Both options prompt the user to create a query using a dropdown list of variables and other prompts. The variable list is derived directly from the layer chosen.